

MISUSE OF VALUABLE THERAPEUTIC AGENTS: BARBITURATES, TRANQUILIZERS, AND AMPHETAMINES*

A REPORT BY
THE COMMITTEE ON PUBLIC HEALTH
THE NEW YORK ACADEMY OF MEDICINE

THE reported widespread misuse of valuable therapeutic agents—narcotics offer a striking example—represents a public health problem of major proportions. Mounting evidence indicates that there are three families of drugs of proven usefulness which are being misused as much if not more than narcotics. These drugs are the barbiturates, tranquilizers, and amphetamines.

Barbiturates are most commonly used to induce sleep. But a large amount is prescribed also for anxiety, nervousness, tension and other poorly defined conditions. Other normal medical uses for these drugs are as anticonvulsants (in cases of epilepsy), anesthesia and preanesthesia, and for research investigation particularly in neurophysiology. While there are perhaps fifty barbiturates being marketed for clinical use, the ones most frequently prescribed in the United States are barbital, available as Veronal; phenobarbital, as Luminal; pentobarbital, as Nembutal; and secobarbital, as Seconal.

Official government reports on production and sale of barbiturates in this country show that since 1954 at least 700,000 pounds of these substances have been produced each year. In 1960, the figure was 852,000 pounds which, it has been estimated, would provide enough raw material to make approximately six billion one-grain barbiturate capsules or tablets, or about 33 for every man, woman and child in the United States.

In addition, there have been over one billion tablets of another sedative drug, glutethimide—available as Doriden—distributed in the United States in the past seven years. This drug has been described as barbituratelike in chemical structure and pharmacological effect though the manufacturer promotes it as a nonbarbiturate.

The problems arising from the misuse of barbiturates have engaged the Committee's attention for many years. In 1956, the Committee published the third of its reports on this family of drugs and outlined a series of recommendations for controlling their use.

However, it appears that barbiturates continue to be widely misused. A study prepared by the Health Department of the City of New York reveals that in the period between 1957 and 1963, inclusive, there were 8,469 cases of barbiturate poisoning in this city. Of this total 1,165 cases were fatal and listed as suicides or due to undetermined causes. The rest, non-fatal, included 4,179 attempted suicides; 744 accidental poisonings; and 2,351 poisonings due to undetermined circumstances.

Futhermore, it has been demonstrated by a group of investigators at the

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Addiction Research Center in Lexington, Kentucky, that barbiturates taken regularly in large quantities produce all three characteristic symptoms of addiction: tolerance, physical dependence and psychic dependence.

Tranquilizers and ataraxics are being offered as safer, equally effective and dependable replacements for barbiturates in the treatment of tension, stress and for relieving anxiety. The three principal groups of compounds in this family of drugs are phenothiazine derivatives, including chlorpromazine, which is available as Thorazine; rauwolfia derivatives, adaptations of Indian snakeroot; and a miscellany of compounds, including the best-selling meprobamate, available as Miltown and Equanil; and chlordiazepoxide, available as Librium. According to one expert, several of these are misrepresented as tranquilizers since they are pharmacologically closer to sedatives and have been reported by several objective observers to have the same addicting properties as barbiturates.

And in a recent hearing on specialized drugs and drug problems before a subcommittee of the U.S. Senate, it was noted that in 1961 Americans ingested a mountain of tranquilizers weighing 1,400,000 pounds.

More recently, tranquilizers were described as rivaling barbiturates as suicide pills. From a study of 968 tranquilizer poisonings reported over a 17-month period in 1959-60 to the United States Public Health Service's National Clearinghouse for Poison Control Centers, it was noted that most of the suicides attempted with tranquilizers had involved the mildest of these drugs. In addition, it was found that numerous cases of stupor, convulsions and coma resulted from overdoses of tranquilizing drugs. But in some cases deleterious effects were reported from the use of prescribed dosage.

The use of tranquilizers and barbiturates with suicidal intent points up the fact that suicide, as the fifth leading cause of death in the United States, has become a major public health problem. The seriousness of the situation has impelled a number of medical and nonmedical agencies throughout the country to institute suicide prevention programs.

In New York City, the Department of Hospitals has in operation, on a 24-hour basis, emergency psychiatric services in five municipal hospitals (Bellevue, Jacobi, Elmhurst, Kings County, and Metropolitan). In addition, there is a 24-hour suicide prevention telephone service at Kings County Hospital. Persons wishing help from that service may call INGersoll 2-3322 at any hour of the day or night. A psychiatrist will be available to respond to callers seeking aid.

Another agency in New York City which has been established for the purpose of dealing with suicidal crisis is the Save-A-Life League. The League has offices in midtown Manhattan but is prepared to render aid to anyone in need who calls MUrray Hill 7-2142.

Amphetamines act primarily as stimulants to the central nervous system. They are effective in relieving fatigue, in lightening emotional depression and, because they tend to suppress the appetite, in the control of obesity. When prescribed by responsible physicians, these drugs are found to be helpful in treating neurotic and depressed patients. When misused, they borrow energy which the body cannot afford to spend.

The most commonly used amphetamines are Benzedrine and Dexedrine. And because this drug promotes alertness—especially in combination with alcohol—it is most attractive to thrill-seeking youths. According to a report presented to a U. S.

Senate Subcommittee on Juvenile Delinquency, the use of amphetamines by juveniles and young adults is mushrooming all over the country. It was stated that they are used increasingly by children and are linked with delinquency.

Moreover, these so-called "pep pills" are all the fashion among college youths and teenagers. It is reported that amphetamines are a large element in wild orgiastic binges in college communities throughout the nation. Meanwhile, a number of investigators have pointed out that amphetamines alone and in combination with barbiturates have addictive properties.

The consequences of misuse of any of these three drugs are many, including death; temporary or permanent damage to the brain or nervous system; poisoning; and addiction. Children or youths who have been made stuporous by the ingestion of sedatives or tranquilizers or euphoric by use of amphetamines are most vulnerable or prone to sexual offenses, either as victims or perpetrators.

In recent years, a considerable number of serious accidents on the highways and in the air were traced to the use of amphetamines or tranquilizers by persons operating the vehicles. Tranquilizers were blamed in 1959 when a pilot taking them crashed a plane, killing all 26 aboard. More recently, when police searched two trailer trucks which had been involved in a multiple-vehicle accident on the New Jersey Turnpike, they discovered a total of 14 Benzedrine tablets. The two truckers had been trying to fight off fatigue with the drugs. They also had been traveling more than 60 miles an hour in a 35-mile zone in heavy fog. The accident killed them and four others.

Dangerous episodes listed as accidents may take place when a person takes a single overdose of one of these drugs, or repeated doses of barbiturates at short intervals. Death or near-death can result, and survival often depends on heroic measures. And when there is no clear evidence of an attempt at suicide, these instances are listed as poisonings under undetermined circumstances.

Not all persons who die from misuse of barbiturates intend to kill themselves. Some have no thought of suicide but die from an accidental overdose of the drug. Then there is a second group of persons who threaten to kill themselves but do not really intend to die. Death comes when they miscalculate in the dosage or in their arrangements to be saved. But, of course, there are persons who misuse the barbiturates especially for suicide and do succeed in their purpose.

The extent of the problem is pointed up in a study prepared for the United Nations Bulletin on Narcotics in which it is hypothesized "that the total number of people in the United States using barbiturates, other sedatives, stimulants and tranquilizers would approach five million, not to mention several hundred marijuana and narcotics users. . . . There are also problems involving glue-sniffing (by young children) . . . drinking cough syrups containing codeine and alcohol, and abuse of a whole range of other substances affecting the mind, including lysergic acid (LSD) and mescaline (peyote)."

Nevertheless, there is an astonishing lack of solid data about the abuse of barbiturates in the United States. The Advisory Commission on Narcotics and Drug Abuse, appointed in 1963 by President Kennedy, reported that the records of various agencies connected with drug abuse frequently are inaccurate, incomplete and unreliable. The Commission report went on to say that there are large numbers of drug abusers who never come to the attention of the community; that there is an increasing abuse of non-narcotic drugs concomitant with a decrease in the abuse of

narcotics; that there is an entirely new and increasing abuse of drugs periodically on a spree basis; and that the possible abuse of barbiturates and amphetamines may be increasing because they are cheaper, easier to handle, and more easily obtainable.

The findings of the President's Advisory Commission have been documented by a wholesale number of articles in the lay magazines on the widespread use of "goof balls," marijuana, glue-sniffing, and even narcotics among juveniles on sprees.

The first effort, on a federal level, to control the use of barbiturates and amphetamines in this country was the so-called Durham-Humphrey Amendment in 1951 which specifically restricted these drugs to prescription and refill only upon the authorization of a physician. The Congress also said that the barbiturates posed a special problem not common to all drugs because they are desired by addicts for nonmedical use, and the legislators predicted that this would call for further controls in the future.

Several years later, committees of both Houses of Congress heard testimony on the barbiturate problem in this country. A bill introduced at that time to amend the Federal Food, Drug and Cosmetic Act would have prohibited the manufacture, sale or possession of barbiturates except by persons specifically authorized by the bill and would have required that records be kept of all transactions involving these drugs. This bill and other subsequent Congressional efforts to increase controls on barbiturates failed to pass. According to an observer: "The public health problem commented upon by Congress has not improved and in fact has worsened since 1956 with large amounts of barbiturates escaping from legitimate channels of commerce at every level of the chain of distribution."

At the present time, federal law in the United States applies solely to barbiturates shipped in interstate commerce; requires no inventory control; but does require that copies of purchase orders for these drugs be made available for inspection for appropriate government agencies.

In 1962, Congress rejected provisions to increase the controls of barbiturates as proposed in H.R. 11581 and in S. 1552. In 1963, S. 553 was introduced for the same purpose but failed to pass. It has been revised and introduced again in the current session of Congress as S. 2628.

The entire problem is described succinctly in the findings and declarations of Sec. 2 of the proposed bill:

"The Congress hereby finds and declares that there is a widespread illicit traffic in barbiturates, in psychotoxic drugs moving in or otherwise affecting interstate commerce; that the use of such drugs, when not under the supervision of a licensed practitioner, may cause a wide variety of acute and chronic changes in psychological functioning, social behavior, or personality, such as difficulties in judgment and coordination, disorderly thinking, disturbances in mood, bizarre and abnormal perceptual experiences, and more severe behavior disturbances such as attempted suicide and antisocial activities; that this illicit traffic results in extensive sale and distribution of such drugs to juveniles and youths, as well as adults, not under the supervision of a licensed practitioner; that the use of such drugs by juveniles, when not under the supervision of a licensed practitioner, may lead them to perform acts of delinquency and crime and to experiment with narcotic drugs, which experimentation may result in narcotic addiction; that the use of such drugs, when not under the supervision

of a licensed practitioner, often endangers safety on the highway and otherwise has become a threat to the public health and safety, making additional regulations of such drugs necessary regardless of the intrastate or interstate origin of such drugs; that in order to make regulation and protection of interstate commerce in such drugs effective, regulation of intrastate commerce is also necessary because, among other things, such drugs, when held for illicit sale, often do not bear labeling showing their place of origin and because in the form in which they are so held or in which they are consumed a determination of their place of origin is often extremely difficult or impossible; and that the regulation of interstate commerce without the regulation of intrastate commerce in such drugs, as provided in this Act, would discriminate against and depress interstate commerce in such drugs."

A model state law concerning hypnotic or somnifacient drugs, patterned after the federal law, was suggested by the Council of State Governments in 1955. This model law is similar to the recommendations proposed by the Committee on Public Health in its 1956 report except in the following particulars: although it requires that refilling of a prescription must be specifically authorized, it does not specify a minimum interval between renewals, the total number of renewals, and the expiration date of the prescription. On the other hand, it includes a section on penalties. One of the provisions in the model law is similar to that recommendation made by the Committee on Public Health which provided that the physician must maintain records of barbiturates distributed by him.

Until 1963, the law in New York State controlling barbiturates provided that duly authorized prescriptions for these drugs had a life of six months. Prescriptions could be refilled a number of times within this period.

Prompted by the desire to bring the New York law into conformity with the federal regulations, the New York State Legislature in 1963 enacted Sec. 6814 of the State Education Law. The principal provisions of this new law remove the six months' life of the prescription and require only that such a prescription shall be written by a duly authorized person and that the druggist must record on the prescription the date of the refilling.

The New York State Penal Law, Sections 1747-b and 1747-c, provides that any person who sells, exchanges or gives away barbiturates or amphetamines in violation of the State Education Law, shall be liable to imprisonment for not more than a year, or a fine of not more than five hundred dollars, or both, upon conviction for a first offense; but if the violation is a second offense, the person shall be liable to imprisonment for not more than two years, or a fine of not more than one thousand dollars, or both.

For the past ten years, The New York City Sanitary Code and the Health Code which replaced it have contained a regulation providing that prescriptions for barbiturates had a life of three months. At the present time, however, efforts are being made to change this regulation in order to bring it into conformity with the less restrictive state and federal laws.

In 1946, the Committee on Public Health was asked by the New York City Commissioner of Health to give its opinion on the desirability of extending restrictive measures regarding the sale and distribution of barbiturates. The Commissioner submitted to the Committee a draft of proposed regulations which were drawn up in cooperation with the New York office of the Federal Bureau of Narcotics.

The Committee studied the proposed changes in the regulations and expressed the view that in the interest of public health, the suggested extension of control should not operate to interfere with the freedom of physicians in their practice; rather it should guard against misuse by the dispenser and the user.

The Committee recommended the following specific regulations:

1. Prescriptions should be refillable when so indicated by the issuing physician; but such prescriptions should indicate a minimum interval between renewals and the total number of renewals. No prescription containing a barbiturate should be refilled after six months from date of issuance.

The Committee pointed out that in certain conditions the treatment makes renewals necessary. And while it was aware that, in some cases, an unnecessary financial hardship is imposed on the patient who must return to the physician for a new prescription, the Committee felt that it is important for the physician to see the patient occasionally in order to evaluate the treatment.

2. Pharmacists should not reveal the content of or furnish copies of prescriptions to patients.

3. Prescriptions should carry suitable information about the identity of the patient and the prescriber.

4. In an emergency, a physician should be allowed to transmit to a pharmacist by telephone a prescription for not more than six average doses of barbiturate drugs provided a written prescription is supplied to the dispensing pharmacist within 72 hours. Should the pharmacist fail to receive such a written prescription, he should notify the Health Department of the omission.

5. Proper records of dispensed barbiturates should be kept by physicians, dentists, and veterinarians.

6. Manufacturers, wholesalers and jobbers should maintain suitable records of sales and distribution, and inventories of stocks.

7. Pharmacists should keep records of bills of purchase of barbiturates and copies of prescriptions on which drugs were dispensed, including notation of amounts dispensed upon refilling.

8. Barbiturates should not be supplied to any person except on prescription or in the course of legal sale within the drug trade.

All of the Committee's recommendations, in either their original or slightly varied form, were incorporated in the Sanitary Code by the end of 1947.

In the ten years between 1946 and 1956, the Committee continued to study the misuse of barbiturates. And at the end of this period, it published a report which made the following recommendations:

1. The model law controlling the manufacture and distribution of barbiturates should be adopted by all states. Large cities with home rule should have laws patterned after this act.

2. A realistic effort toward enforcement of the model law when enacted is an essential step. An adequate staff of inspectors to examine records should be organized. Efforts at enforcement should be concentrated on the large cities where the rates of incidence of barbiturate poisoning are highest.

3. An educational campaign should be conducted by health departments and medical and pharmaceutical societies to remind their members of their responsibilities of acquainting patients with the dangers of misuse of barbiturates. At the same time, there should be a campaign, using all media, to inform the public of the

risks attached to misuse of barbiturates.

4. Above all, it is highly desirable that adequate funds should be provided to support research on the causes of unrest, anxiety, and tension that are so prevalent among the population and are the basis for such great use and misuse of barbiturates.

Research should take into account the popularly-held belief that psychoactive drugs are a cure-all for every emotional and psychological stress, whether slight or great, and a means to attain "happiness." Thus, some persons are known to take an amphetamine in the morning, a tranquilizer to get through the day, and a barbiturate at night. As a result, these persons develop an overwhelming dependence on such drugs.

But until research develops the desired information, there should be initiated immediately an educational campaign designed to teach the public that both the goal of "happiness" and the use of psychoactive drugs to achieve that goal are illusionary.

At this point, it is clear that misuse of barbiturates, tranquilizers and amphetamines presents different problems according to the segments of the population and the variety of consequences attendant on such misuse: juveniles may injure their health, engage in antisocial or immoral acts, or may incur poisoning or addiction; both juveniles and adults may have auto accidents as a result of taking sedatives, tranquilizers or stimulants; adults may incur poisoning or near-death from overdose of these drugs, particularly barbiturates; accidental death may result from overdose of barbiturates; and finally, barbiturates and related drugs may be used to commit suicide.

The remedies which the Committee proposes must be seen against the background of the hazards listed above:

1. Federal law should be designed to control the movement of barbiturates, amphetamines and other psychotropic drugs in order to combat the illicit traffic in these drugs and to prevent their continued misuse.

2. The federal law on the prescription of barbiturates should be more restrictive. The Committee feels it should be more in accord with the first recommendation in the 1946 report.

3. There should be stricter enforcement of the existing law on dispensing barbiturates and amphetamines so that they do not get into the hands of juveniles.

4. Motor vehicles should not be operated by drowsy drivers. Barbiturates, tranquilizers, amphetamines, and antihistamines may produce mental confusion, drowsiness, or postpone drowsiness. Persons who have taken them in a dosage that would produce these effects should not drive while under their influence.

5. Suicide is a major cause of death. But there are agencies which stand ready to give aid in thwarting suicide and rescuing the victim. The existence of these agencies should be given the widest publicity through all media of communication. In New York City, the telephone numbers of the emergency suicide prevention agencies of the Department of Hospitals should be made known to all the residents. The telephone numbers of the Save-A-Life League and other agencies geared to provide aid to a would-be suicide should also be disseminated widely. Finally, there should be a provision for mandatory psychiatric examination of a person immediately after regaining consciousness following an unsuccessful attempted suicide by an overdose of these drugs.

6. There should be an educational campaign to change the present public worship of "happiness" and "tranquility." This attitude on the part of many people produces an almost slavish dependence on psychotropic drugs.

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